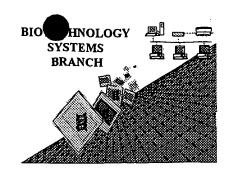
15e

RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

09/701,395

Source:

PG 09,

Date Processed by STIC:

1/23/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216. PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax) PATENTIN 3.0 e-mail help: patin30help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER</u> <u>VERSION 3.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address: http://www.uspto.gov/web/offices/pac/checker

see 6

Does Not Comply

PCT09

DATE: 01/23/2001 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/701,395

Imput Set : A:\108172-00022.txt Output Set: N:\CRF3\01232001\I701395.raw

4 <110> APPLICANT: CUNNINGHAM JR., FRANCIS X. SUN, ZATREN 7 <120> TITLE OF INVENTION: GENES OF CAROTENOID BIOSYNTHESIS AND METABOLISM AND METHODS OF USE THEREOF 8 10 <130> FILE REFERENCE: 8172-9023 C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/701,395 C--> 13 <141> CURRENT FILING DATE: 2000-12-04 Corrected Diskette Needed 15 <150> PRIOR APPLICATION NUMBER: 09/088,724 16 <151> PRIOR FILING DATE: 1998-06-02 18 <150> PRIOR APPLICATION NUMBER: 09/088,725 19 <151> PRIOR FILING DATE: 1998-06-02 21 <160> NUMBER OF SEQ ID NOS: 61 23 <170> SOFTWARE: Patentin Ver. 2.0 25 <210> SEQ ID NO: 1 26 <211> LENGTH: 1860 27 <212> TYPE: DNA 28 <213> ORGANISM: Arabidopsis thaliana 30 <220> FEATURE: 31 <221> NAME/KEY: CDS 32 <222> LOCATION: (109)..(1680) 34 <400> SEQUENCE: 1 60 . C--> 35 acaaaaggaa ataattagat toototttot gottgotata cottgataga acaatataac 37 aatggtgtaa gtottotogo tgtattogaa attatttgga ggaggaaa atg gag tgt 117 Met Glu Cys 38 39 165 41 gtt ggg get agg aat tte gea gea atg geg gtt tea aca ttt eeg tea 42 Val Gly Ala Arg Asn Phe Ala Ala Met Ala Val Ser Thr Phe Pro Ser 1.0 15 45 tgg agt tgt cga agg aaa ttt cca gtg gtt aag aga tac agc tat agg 46 Trp Ser Cys Arg Arg Lys Phe Pro Val Val Lys Arg Tyr Ser Tyr Arg 213 25 30 49 aat att ogt tio ggt tig tigt agt gio aga got ago ggo ggo gga agt 261 50 Asn The Arg Phe Gly Leu Cys Ser Val Arg Ala Ser Gly Gly Gly Ser 51 40 45 50 53 too ggt agt gag agt tgt gta gog gtg aga gaa gat tto got gac gaa 54 Ser Gly Ser Glu Ser Cys Val Ala Val Arg Glu Asp Phe Ala Asp Glu 57 gaa gat tit gig aaa got ggt ggt tot gag att ota tit git caa atg 58 Glu Asp Phe Val Lys Ala Gly Gly Ser Glu Ile Leu Phe Val Gln Met 59 70 75 80357 405 61 cag cag aac aaa gat atg gat gaa cag tot aag ott git gat aag itg 63 Gln Gln Asn Lys Asp Met Asp Glu Gln Ser Lys Leu Val Asp Lys Leu 90 66 cct cct ata tca att ggt qat ggt gct ttg gat cat gtg gtt att ggt 453

67 Pro Pro Ile Ser Ile Gly Asp Gly Ala Leu Asp His Val Val Ile Gly

70 tgt ggt cet get ggt tta gee ttg get gea gaa tea get aag ett gga

11.0

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501

105

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/701,395

DATE: 01/23/2001 TIME: 11:13:18

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Output Set: N:\CRF3\01232001\1701395.raw

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												ttt					549
75	Leu	Lys	Val.	Gly	reu	rle	Gly	Pro	Asp	Leu	Pro	Phe	Thr	Asn	Asn	Тул	
76				135					140					145			
78	ggt	gtt	tgg	gaa	gat	gaa	ttc	aat	gat	ctt	ggg	ctg	caa	aaa	tgt	att.	597
79	Gly	va.l	Trp	Glu	Asp	G l.u	Phe	Asn	Asp	Leu	Gly	Leu	G l.n	Lys	Cys	Lle	
80			150					155					160				
82	gag	cat	gtt	tgg	aga	gag	act	att	gtg.	tat	ctg	gat	gat	gac	aag	oct.	645
83	G l.u	His	Val	Trp	Arg	Glu	Thr	Ile	Val	Tyr	Leu	Asp	Asp	Asp	Lys	Pro	
84		165		-	-		170					175					
86	at.t	acc	att	qqc	eq t	get	tat.	qqa	aga	gt.t	agt	cga	cgt	ttg	ctc	cat.	693
87	He	Thr	He	Gly	Arg	Al.a	Tyr	Gly	Arg	Val	ser	Arg	Arg	Leu	Leu	His	
	180			•	•	1.85	•	•			190					195	
		gag	ct.t	t.t.a	agg	agg	Lat	qtc	qaq	tea	ggt.	gtc	teg	tac	ctt	age	741
91	Glu	Glu	Leu	Leu	Arg	Arq	Cvs	val.	Ğlu	ser	Glv	Val.	ser	Tyr	Leu	ser	
92	3				200	,	-,-			205	•			·	210		
	Lea	aaa	att	gac		ata	aca	αaa	act	tct	qat	gge	ct.t	aqa	ctt.	gtt	789
95	Ser	Lvs	Val	ASD	Ser	Ile	Thr	Glu	Ala	Ser	Asp	Gly	Leu	Arq	Leu	Val	
96		14.7 53		215	50%				220			2		225			
	act	tat	gac		aat	aac	atc	att		tac	agg	ctt	acc	act	att	act.	837
99	Mia	CVS	Aco	Asp	Asn	Asn	Val	Tle	Pro	CVS	Arg	Leu	Ala	Thr	Val	Ála	
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103	2 901	. 999 c Gly	/ Ala	λgo	Set	r Glv	LVS	T.e.	1.01	Gli	ייף ו	r Glu	ı Val	GIV	gĺy	orq v	
104		24				. 01)	250				,	255			,		
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100) aga	ı yı	. rgi	· yeş	Glr	n acc	· Ala	Tur	. GIV	, Va	G)	ı Val	Glu	. Va.l	Gli	ıΛsn	
	3 260		L Cys	, , ,	. ()11	265				,	27					275	
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111	, ug.	r Dr	2 Cut	, gui	Dre	. Jak	Gli	Met	Val	Phe	Me'	l Asi	TVT	Arc	ASI	Tyr	
1.12			, .,.	E	280					28			2 -		290		
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			- atr			ı aca		r tea			e titi	c tto	a gac	r dad	i aca	a tgt	1077
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120			310) II(.(319		,			320			1 -	
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125		32		L Dj.	,	, , ,	330			,		33			,		
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120	Mo	y Lu	. Are	T LO	ı yar	יוליף כ	r T.a.	, 995 1 Cls	, T14	aΔr	TI	e T.e.	ı Lvs	Th:	יטיף י	r Glu	
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			a to	r to	n tei			anti	- aa	ר מחי			a cca	330	a ac	c gaa	1221
131	s gas	y ya.	y Ly	n Ser	יינטיי	- T14	Dr	. ye:	- 23.	, GJ.	y Sp	r Lei) Pro) Ası	n Th	r Glu	
133		. G1.	~ 11.	9 341	. 1 <i>71</i> 360				. 01	36					37		
		2 22	י מפיד	t ct.			- 001	- act	. ac			c at	a ata	cat	-	c gca	1269
100	, Ca	a ad	, aal	n Ter	, Al-	ph/	- 99'	, Al:	Δl	- 9°С 3 Д1	a Sp	r Mai	. Val	Hi	s Pro	o Ala	
136	, G1.1	படி	o ASI		' WTG		- 01)	, 410					_ , 41				

DATE: 01/23/2001 TIME: 11:13:18 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/701,395

Input Set : A:\108172-00022.txt
Output Set: N:\CRF3\01232001\1701395.raw

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	Thr	Gly	•	Ser	Val	Val	Arg		Leu	ser	G.Lu	Ala		Lys	Tyr	Λla	
141			390					395					400				
	t.ca							-		• •				-			1365
144	Ser	Val.	11e	Ala	Glu	He	Leu	Arg	Glu	GLu	Thr	'l'hr	Lys	Gln	11e	Asn	
145		405					410					4 1.5					
147	agt.	aat,	att	t;ca	aga	caa	get	t.gg	gat	act	tta	t.qq	cca	cca	gaa	agg	1413
148	ser	Asn	Tle	Ser	Arg	Gln	Ala	Trp	Asp	Thr	rea	Trp	Pro	pro	Glu	Arg	
149	420					425					430					435	
	aaa																1461
152	Lγs	Arg	G l.n	Arg		Phe	Phe	Leu	Phe	Gly	Leu	Ala	Leu	He	Va.l	Gln	
153					440					445					450		
155	ttc	gat	acc	gaa	ggc	at.t	aga	agc	t.tc	ttc	cyt	act.	t.t.c	ttc	cgc	ctt	1.509
156	Phe	Asp	Thr	Glu	Gly	Tle	Arg	Ser	Phe	Phe	Arg	Thr	Phe	Phe	Arg	Leu	
157				455					460					465			
159	cca	aaa	tgg	atg	t.gg	caa	ggg	ttt	cta	gga	t.ca	aca	tta	aca	tca	gga	1557
160	Pro	Lys	Trp	Met	Trp	C1n	Gly	Phe	Leu	Gly	Ser	Thr	Leu	Thr	Ser	Gly	
161			470					475					480				
163	qat	ctc	gtt	ctc	ttt	gct.	tta	tac	at.g	ttc	gtc	atit	tca	cca	aac	aat	1605
164	Asp	Leu	Val	Leu	Phe	Ala	Leu	Tyr	Met	Phe	Val	I l.e	Ser	Pro	Asn	Asn	
165		485					490					495					
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168	Leu	Arg	Lys	Gly	Leu	Ile	Asn	His	Leu	11e	Ser	Asp	Pro	Thr	Gly	Ala	
169	500					505					510					515	
171	acc	at.g	ata	aaa	acc	tat	ctc	aaa	gta	tgal	it.tia	ott a	atcaa	acte	Lt		1.700
						m		_									
172	Thr	Her	$_{\rm IIe}$	Lys	Thr	туг	reu	Lys	Val								
172 173	Thr	мес	He	Lys	Thr 520	туг	ren	Lys	Val								
1.73				•	520	-		•		ataal	Lega	t.caa	aagaa	ıtg (gtate	gtgggt	1760
1.73 175	aggt	ittgi	tgt a	tata	520 atato	- gt to	gatti	tate	: gaa					-		gtgggt gatgga	1760 1820
173 175 177	aggt	:ttgi	tgt a	atata Etgga	520 atato aaaca	gt to	gatti	tate!	gaa gaat	cta	ıgga			-			
1.73 175 177 179	aggt tact	ittgi lagga gaaaa	tgt a aag 1 aga a	atata Etgga	520 atato aaco aato	gt to	gatti	tate!	gaa gaat	cta	ıgga			-			1820
173 175 177 179 182	aggt tact aacc	ittgi lagga gaaaa D> Si	tgt a aag b aga a EQ II	atata Etgga Baaaa D NO	520 atato aaco aatoo : 2	gt to	gatti	tate!	gaa gaat	cta	ıgga			-			1820
173 175 177 179 182 183	aggt tact aacg <210	ittgi lagga gaaaa D> Si L> Li	tgt a aag (aga a EQ II ENGTI	atata Etgga Baaaa D NO H: 51	520 atato aaco aatoo : 2	gt to	gatti	tate!	gaa gaat	cta	ıgga			-			1820
173 175 177 179 182 183 184	aggt tact aacg <210 <211	ittgi iagga gaaaa D> SI L> LI 2> T!	tgt a aag t aga a EQ II ENGTI YPE:	atata itgga aaaa O NO H: 53	520 atato aaca aato : 2	gt to	gatti catgi cttt	tate! tatag	gaa gaat gu	.ctaa ggt.t.a	ıgga			-			1820
173 175 177 179 182 183 184	aggt tact aacg <210 <211 <212	ittgi lagga gaaaa D> SI L> LI 2> T!	tgt a aag k aga a EQ II ENGTI YPE: RGAN	atata itgga aaaa O NO H: 52 PRT	520 state aaca atca : 2 24 Aral	gt to	gatti catgi cttt	tate! tatag	gaa gaat gu	.ctaa ggt.t.a	ıgga			-			1820
1.73 175 177 179 1.82 1.83 1.84 1.85	aggt tact aacg <210 <211 <212	ittgi lagga gaaaa D> SI L> LI 2> TI 3> OI	tgt a aga a eQ II ENGTH YPE: RGAN:	atata itgga aaaa o NO H: 52 PRT ISM:	520 atato aato : 2 24 Aral	gt to	gatti catgi cttto osis	tato: tatag gunti	gaa gaat gu gu	ictaa ggtha	igga igtg	gtga	atoga	iaa i	tggaq	gatgga	1820
1.73 1.75 1.77 1.79 1.82 1.83 1.84 1.85 1.87 1.88 1.89	aggt tact aacc <210 <211 <212 <400 Met	ittgi lagga gaaaa D> SI L> Li 2> T! 3> OI Glu	tgt a aag k aga a EQ II ENGTH YPE: RGAN: EQUEN	ntata itgga aaaaa) NO H: 52 PRT ISM: VCE: Val	520 atatomatomatomatomatomatomatomatomatomat	gt to aa ac ag to oidop	gatti catgl cttts osis Arg	tato tatag gunti thai	gaa gaat gu gu liana	ictaa ggtta a Ala 10	ngga ngtg Ala	gtga	atega	val	ser 15	gatgga Thr	1820
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1.73 1.75 1.77 1.79 1.82 1.83 1.84 1.85 1.87 1.88 1.89	aggt tact aacc <210 <211 <212 <400 Met	ittgi lagga gaaaa D> SI L> Li 2> T! 3> OI Glu	tgt a aag k aga a EQ II ENGTH YPE: RGAN: EQUEN	ntata itgga aaaaa) NO H: 52 PRT ISM: VCE: Val	520 atatomatomatomatomatomatomatomatomatomat	gt to aa ac ag to oidop	gatti catgl cttts osis Arg	tato tatag gunti thai	gaa gaat gu gu liana	ictaa ggtta a Ala 10	ngga ngtg Ala	gtga	atega	val	ser 15	gatgga Thr	1820
1.73 1.75 1.77 1.79 1.82 1.83 1.84 1.85 1.87 1.88 1.89 1.91 1.92 1.94	aggt tact aacc <210 <211 <212 <400 Met	ittgi lagga gaaaa D> SI L> LI 2> T! 3> OI OD> SI Glu	tgt a aga a aga a EQ II ENGTH YPE: RGAN: EQUEN CYS	atata itgga aaaaa O NO H: 53 PRT ISM: VCE: Val Trp	520 atato aatoa : 2 24 Aral 2 Gly 5 Ser	gt to aa ad ag to Didop Ala Cys	gattu ratgi ettte psis Arg	tator tatagether thal Asn Arg	gaa gaat geg Liana Phe Lys 25	a Ala Phe	ngga ngtg Ala Pro	gtga Met Val	Ala Val Arg	Val	Ser 15 Arg	gatgga Thr Tyr	1820
1.73 1.75 1.77 1.79 1.82 1.83 1.84 1.85 1.87 1.88 1.89 1.91 1.92 1.94 1.95	aggt tact aacg <210 <211 <212 <400 Met 1 Phe	ittgi iagga gaaa; D> Si D> Si Glu Pro	tgt a aag a aga a EQ II EPGTH YPE: RGAN: EQUEN CYS Ser Arg 35	atata ataga aaaa O NO H: 53 PRT ISM: VCE: Val Trp 20 Asn	520 atato aaaca aatoa 224 Aral 2 Gly 5 Ser	gt to aa ac ag to Didop Ala Cys	gatto catgo catto ca catto ca catto ca ca catto ca ca ca ca ca ca ca ca ca ca ca ca ca	tates tatas gtt.ts thal Asn Arg Gly 40	gaa gaat gug Liana Phe Lys 25 Leu	Ala Phe	agtg Ala Pro Ser	ytya Met Val	Ala Val Arg 45	Val Lys 30 Ala	Ser 15 Arg Ser	Thr Tyr Gly	1820
173 175 177 179 182 183 184 185 187 188 189 191 192 194 195	aggt tact aacg <210 <211 <212 <400 Met 1 Phe	ittgi lagga gaaaa J> SI l> LI 2> T! 3> OI Glu Pro	tgt a aag a aga a EQ II EPGTH YPE: RGAN: EQUEN CYS Ser Arg 35	atata ataga aaaa O NO H: 53 PRT ISM: VCE: Val Trp 20 Asn	520 atato aaaca aatoa 224 Aral 2 Gly 5 Ser	gt to aa ac ag to Didop Ala Cys	gatti catgl cttte osis Arg Arg Phe	tates tatas gtt.ts thal Asn Arg Gly 40	gaa gaat gug Liana Phe Lys 25 Leu	Ala Phe	agtg Ala Pro Ser	ytga Met. Val Val	Ala Val Arg 45	Val Lys 30 Ala	Ser 15 Arg Ser	Thr Tyr Gly	1820
1.73 1.75 1.77 1.79 1.82 1.83 1.84 1.85 1.87 1.88 1.91 1.92 1.94 1.95 1.97	aggt tact aacc <210 <211 <212 <400 Met 1 Phe ser	ittgi iagga gaaaa J> SI I> LI 2> T! 3> OI Glu Pro Tyr Gly 50	tgt a aag k aga a eQ II ENGTH YPE: RGAN: EQUEN CYS Ser Arg 35 Ser	atata itgga aaaa) NO H: 52 PRT ISM: VCE: Val Trp 20 Asn	520 atato aatoa : 2 24 Aral 2 Gly 5 ser 11e	gt to la ac pidop Ala Cys Arg	gatti catgl cttto osis Arg Arg Phe Glu 55	thal thal Asn Arg Gly 40 Ser	gaat gaat gug Liana Phe Lys 25 Leu Cys	Ala 10 Phe Cys	Ala Pro Ser	ytga Met Val Val	Ala Val Arg 45 Arg	Val Lys 30 Ala Glu	Ser 15 Arg Ser Asp	Thr Tyr Gly Phe	1820
1.73 1.75 1.77 1.82 1.83 1.84 1.85 1.87 1.88 1.91 1.92 1.94 1.95 1.97 1.98 2.00	aggt tact aacg <210 <211 <212 <400 Met 1 Phe	ittgi iagga gaaaa J> SI I> LI 2> T! 3> OI Glu Pro Tyr Gly 50	tgt a aag k aga a eQ II ENGTH YPE: RGAN: EQUEN CYS Ser Arg 35 Ser	atata itgga aaaa) NO H: 52 PRT ISM: VCE: Val Trp 20 Asn	520 atato aatoa : 2 24 Aral 2 Gly 5 ser 11e	gt to la ac ag to Didop Ala Cys Arg Ser	gatti catgl cttto osis Arg Arg Phe Glu 55	thal thal Asn Arg Gly 40 Ser	gaat gaat gug Liana Phe Lys 25 Leu Cys	Ala 10 Phe Cys	Ala Pro Ser Ala Gly	ytga Met Val Val	Ala Val Arg 45 Arg	Val Lys 30 Ala Glu	Ser 15 Arg Ser Asp	Thr Tyr Gly Phe Phe	1820
173 175 177 179 182 183 184 185 187 198 191 192 194 195 197 198 200 201	aggt tact aacc <210 <211 <212 <400 Met 1 Phe Ser Gly	tttgggaaaa)> SI > LL > SI > SI > Cl > SI > Glu Pro Gly Asp	tgt a aga a eQ II eNGTH YPE: RGAN: EQUEN CYS Ser Arg 35 Ser Glu	htata ttgga aaaaa) NO H: 5: PRT ISM: Val Trp 20 Asn Ser Glu	520 btatte aaacca aatca : 2 24 Aral 2 Gly 5 Ser 1le Gly Asp	gt to aag to Ala Cys Arg Ser Phe 70	gattt ratgi ettt posis Arg Arg Phe Glu 55 Val	thal thal Asn Arg Gly 40 Ser	i gaa g aal gtg liana Phe Lys 25 Leu Cys	Ala 10 Phe Cys Val	Ala Pro Ser Ala Gly 75	Met Val Val Val 60 Ser	Ala Val Arg 45 Arg	Val Lys 30 Ala Glu	Ser 15 Arg Ser Asp Leu	Thr Tyr Gly Phe Phe 80	1820
173 175 177 179 182 183 184 185 187 198 199 191 194 195 197 198 200 201 203	aggt tact aacc <210 <211 <212 <400 Met 1 Phe Ser Gly	tttgggaaaa)> SI > LL > SI > SI > Cl > SI > Glu Pro Gly Asp	tgt a aga a eQ II eNGTH YPE: RGAN: EQUEN CYS Ser Arg 35 Ser Glu	htata ttgga aaaaa) NO H: 5: PRT ISM: Val Trp 20 Asn Ser Glu	520 btatcaaaacaaatcaaatcaaatcaaatcaaatcaaat	gt to aag to Ala Cys Arg Ser Phe 70	gattt ratgi ettt posis Arg Arg Phe Glu 55 Val	thal thal Asn Arg Gly 40 Ser	i gaa g aal gtg liana Phe Lys 25 Leu Cys	Ala 10 Phe Cys Val	Ala Pro Ser Ala Gly 75	Met Val Val Val 60 Ser	Ala Val Arg 45 Arg	Val Lys 30 Ala Glu	Ser 15 Arg Ser Asp Leu	Thr Tyr Gly Phe Phe 80	1820
173 175 177 179 182 183 184 185 187 198 191 192 194 195 197 198 200 201 203 204	aggt tact aacc <210 <211 <212 <400 Met 1 Phe Ser Gly	tttgi tagga gaaaa 2> Si 1> Li 2> TY 3> OI Glu Pro 50 Asp Gin	tgt aag laaga aaga aaga aaga aaga aaga a	ntatatatiggaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	520 btatca aaaca aatca aatca aatca ca a	gt togan and and and and and and and and and a	gattt catgl cttts osis Arg Arg Phe Glu 55 Val.	thal Asn Arg Gly 40 Ser Lys	I gaa g aal g gtg liana Phe Lys 25 Leu Cys Ala Met	Ala 10 Phe Cys Val Gly Asp 90	Ala Pro Ser Ala Gly 75 Glu	Met Val Val 60 Ser Gln	Ala Val Arg 45 Arg Glu Ser	Val Lys 30 Ala Glu Ile	Ser 15 Arg Ser Asp Leu 195	Thr Tyr Gly Phe Phe 80 Val	1820

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/701,395 DATE: 01/23/2001 TIME: 11:13:18

Input Set : A:\108172-00022.txt
. Output Set: N:\CRF3\01232001\1701395.raw

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	va 1	He	Gly		Glv	Pro	Ala	GLV		Ala	Leu	Ala	Ala	Glu	ser	Ala
210	,		115	0,0				120					125			
	1.98	Leu		Leu	Lvs	va 1	Glv		116	Glv	Pro	Asp	Leu	Pro	Phe	Thr
213	1.10	130	· ,		٠,,٠		135			,		140				
215	Acn	Asn	92.0	Cly	Val	Tro		Asp	Glu	Phe	Asn	ASD	Leu	Glv	Leu	Gln
	145	******		01/		1.50	0		•		155					160
		Cve	r 1 12	Clu	Hic		Tro	Ara	Glu	ጥh r		Val	TVC	Len	Asp	Asp
2.19	ujs	~y			165				0.0 -	1.70					175	
	۸en	Lve	pro	Ela		110	Glv	Ara	Ala		Glv	Ara	Val	Ser	Arg	Arq
222	vi2f,	Буз		180		2.2.0	U.,		185	-1-	ŭ-,			190		
	Lan	r an	Hie		C1n	l' en	1.60	Ara		CVS	Val	Gla	Ser		Va.l	Ser
225	Lie.u	ise u	195	σıα	G I.u	1,00	DC tt	200		-1-		0 1	205	•		
	Tur	1 (21)		Sar	Tire	Val	Asn		Tle	Thr	Glu	Ala		Asp	Gly	Leu
228	ı yı	210	JCL	J I.	u) 5	, , ,	215	D., L				220			/	
	à ra		Val	Δla	Cve	Δcn		Acn	Acn	va 1	He		CVS	Αιτα	кеи	Ala
	225	neu	V CL.(75.1.11	Cys	230	,,op	/(3.,			235		0,0	,	*****	240
		บรา	ΑŤa	car	chi		λla	Sar	GIV	LVS		Leu	c) n	Ψvr	\mathbf{GLu}	Val
234	1111	Val	WIG	361	245	MIG	r.r.u	3(.1	(11)	250	пса	ыси	0.1.	- ! -	255	
	C1.1	cly	Dro	Ana		Con	Va 1	#1n	Th r		Tur	GTV	Val	G3 n	Val	Glu
237	GL.y	GLy	PIU	260	VQI	C/3	VUI	G 1.11	265	AIU	171	0.1	, 41	270		01
	Va I	clu	Aco		Dro	TWY	Aen	Dro		Gin	Mot	Val	Pho		Asp	Tyr
240	Val	GIU	275	36.1	FIO	171	A.S.I.	280	LOF.	().[11	110.15	142	285			- 1 -
	Ara	Aco		mh r	λen	c1 u	Lare		Δra	Ser	Len	Glu		Glu	Tyr	Pro
243	ALG	290	ı yı	1111	กอแ	() I (I	295	141	*****	001	1.0.1	300		02	:	
	quar.		Tan	Tur.	Δ1а	Mat.		Met	Thr	T.VS	Ser		Leu	Phe	Phe	Glu
246	305	r itt.	iic a	111	7110	310	110	1101			315				•	320
		Thr	CVS	Len	Ala		Lvs	Asn	va l	Met		Phe	Asp	Leu	Leu	Lvs
250	().L u		0,70	20.00	325	.,,,	-,			330					335	•
	The	Lve	Len	Met.		Ara	Leu	Asn	Thr		G17	Ile	Arq	He	Leu	Lys
253	1111	213	40.11	340			200		345		1		5	350		*
	Thr	Tyr	Glu		Glu	Trp	ser	Tyr	Tle	Pro	Val	G17	Gly	Ser	Leu	Pro
256	~ • • • • • • • • • • • • • • • • • • •	-,-	355					360				· ·	365			
	Asn	Thr		Gln	L7s	Asn	Leu	Ala	Phe	Gly	Ala	Ala	Ala	ser	Met.	Val
259		370			2		375			•		380				
261	His	Pro	Λla	Thr	GIv	Tyr	Ser	Val.	Val	Arg	ser	Leu	ser	Glu	Λla	Pro
262	385				2	390					395					400
		Tvr	Ala	ser	Val	Tle	Ala	Glu	Ile	Leu	Arg	Glu	Glu	Thr	Thr	Lys
265		- 2			405					410	•				4.15	
	Gla	Ile	Asn	ser	Asn	rle	ser	Arq	Gln	Λla	Trp	Asp	Thr	Leu	Trp	Pro
268				420					425					430		
270	Pro	Glu	Arg	Lys	Arq	Gln	Arq	Ala	Phe	Phe	Leu	Phe	Gly	Leu	Ala	Leu
271			435	-				440					445			
273	11e	Val		Phe	Asp	Thr	Glu	Gly	Tle	Arg	Ser	Phe	Phe	Arg	Thr	Phe
274		450					455					460				
276	Phe	λrq	Leu	Pro	Lys	Trp	Met.	Trp	Gln	Gly	Phe	Leu	Gly	Ser	Thr	Leu
277	465					470					475					480
279	Thr	ser	Gly	Asp	Leu	Val	Leu	Phe	Ala	Leu	Tyr	Met	Phe	۷a ۱	Tle	Ser
280			•	-	485					490				•	495	

DATE: 01/23/2001 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/701,395 TIME: 11:13:18 Input Set : A:\108172-00022.txt Output Set: N:\CRF3\01232001\1701395.raw 282 Pro Asn Asn Leu Arg Lys Gly Leu Ile Asn His Leu Ile Ser Asp Pro 500 505 285 Thr Gly Ala Thr Met Ile Lys Thr Tyr Leu Lys Val 286 515 520 288 <210> SEQ ID NO: 3 289 <211> LENGTH: 956 290 <212> TYPE: DNA 291 <213> ORGANTSM: Arabidopsis thaliana 293 <400> SEQUENCE: 3 60 C--> 294 getettete etceteetet accgattee gaeteegeet eccgaaatee ttateeggat 296 tototocgto tottogatti aaacgettti etgiotgtta egtegtegaa gaacggagae 1.20 298 agaattetee gattgagaac gatgagagac eggagageac gagetecaea aacgetatag 240 300 acgctgagta totggcgttg cgtftggcgg agaaattgga gaggaagaaa tcggagaggt 300 302 ceachtaict aategotyct atgitytega gottiggiat cacticiatg yetgitaigg 304 objectacta cagatholoh tiggicalatigg agginging gatobolatig tiggilaligh 360 306 tiggtacatt igetetetet gitggigetg eightggfat ggaatteigg geaagaiggg 420 480 308 cteatagage tetgtggeae gettetetat ggaatatgea tgagteacat cacaaaceaa 540 311 gagaaggace gtttgageta aacgatgttt Ligetalagt gaacgetggt ceaqegalig 313 gtotoctote thatgyatto thomatanag gactoginoc iggiototye titiggogoog 600 315 ggttaggcat aacggtgttt ggaatcgcct acatgtttgt ccaegatggt ctcgtgcaca 660 720 317 agogttteec tgtaggteec ategeogaeg teecttacet eegaaaggte geogeegete 780 319 accagetaca teacacagae aagtteaatg gtgLaccata tggactgttt ettggaceca 321 aggaattgga agaagttgga ggaaatgaag agttagaraa ggagattagt cggagaatca 840 323 aatoatacaa aaaggootog ggotoogggt ogaqttogag ttottgactt taaacaagtt 900 956 325 thaaatooca aattottitt tigtottoig toattaigat calottaaga oggict 327 <210> SEQ TD NO: 4 328 <211> LENGTH: 294 329 <212> TYPE: PRT 330 <213> ORGANISM: Arabidopsis thaliana 332 <400> SEQUENCE: 4 333 Ser Phe Ser Ser Ser Ser Thr Asp Phe Arg Leu Arg Leu Pro Lys Ser 334 1 336 Leu Ser Gly Phe Ser Pro Ser Leu Arg Phe Lys Arg Phe Ser Val. Cys 25 20 339 Tyr Val Val Glu Glu Arg Arg Gin Asn Ser Pro Ile Glu Asn Asp Glu 40 . 342 Arg Pro Glu Ser Thr Ser Ser Thr Asn Ala Ile Asp Ala Glu Tyr Leu 343 50 55 60 345 Ala Leu Arg Leu Ala Glu Lys Leu Glu Arg Lys Lys Ser Glu Arg Ser 346 65 70 75 75 348 Thr Tyr Leu Ile Ala Ala Met Leu Ser Ser Phe Gly Ile Thr Ser Met 349 95 351 Ala Val Met Ala Val Tyr Tyr Arg Phe Ser Trp Gln Met Glu Gly Gly 352

1.05

140

354 Glu Ile Ser Met Leu Glu Met Phe Gly Thr Phe Ala Leu Ser Val Gly 355 115 120 125357 Ala Ala Val Gly Met Glu Phe Trp Ala Arg Trp Ala His Arg Ala Leu

360 Trp His Ala Ser Leu Trp Met Asn His Glu Ser His His Lys Pro Arg

135

352

100

358 130

<210> 13 <211> 960 <212> DNA <213> Tagetes erecta Use Lower-case letters for baser,
when using new Sequence Rules
L format. Please correct globally.

				\mathcal{L}	your	a, pull	. Cove
	<400> 13 CCAAAAACAA	CTCAAATCTC	CTCCGTCGCT	CTTACTCCGC	CATGGGTGAC	GACTCCGGCA	60
	TGGATGCTGT	TCAGCGACGT	CTCATGTTTG	ACGATGAATG	CATTTTGGTG	GATGAGTGTG	120
	ACAATGTGGT	GGGACATGAT	ACCAAATACA	ATTGTCACTT	GATGGAGAAG	ATTGAAACAG	180
	GTAAAATGCT	GCACAGAGCA	TTCAGCGTTT	TTCTATTCAA	TTCAAAATAC	GAGTTACTTC	240
	TTCAGCAACG	GTCTGCAACC	AAGGTGACAT	TTCCTTTAGT	ATGGACCAAC	ACCTGTTGCA	300
	GCCATCCACT	CTACAGAGAA	TCCGAGCTTG	TTCCCGAAAC	GCCTGAGAGA	ATGCTGCACA	360
_	GAGGANNNN	ииииииииии	ииииииииии	ииииииииии	иииииииии	иииииииии	420
	NNNNNNNNN	ииииииииии	иииииииии	иииииииии	иииииииии	иииииииии	480
	NNNNNNNNN	NNNNNNNNN	NNNNNNNNN	иииииииии	иииииииии	NNNNNNNNN	540
	иииииииии	иииииииии	иииииииии	иииииииии	иииииииии	иииииииии	600
	иииииииии	ииииииииии	NNNNNNNNN	NNNNNNNNN	иииииииии	NNNNNNNN	660
	NNNNNNNNN	иииииииии	TCATGTGCAA	AAGGGTACAC	TCACTGAATG	CAATTTGATA	720
	TGAAAACCAT	ACACAAGCTG	ATATAGAAAC	ACACCCTCAA	CCGAAAAGCA	AGCCTAATAA	780
	TTCGGGTTGG	GTCGGGTCTA	CCATCAATTG	TTTTTTTTTT	TTAACAACTT	TTAATCTCTA	840
	TTTGAGCATG	TTGATTCTTG	TCTTTTGTGT	GTAAGATTTT	GGGTTTCGTT	TCAGTTGTAA	900
	TAATGAACCA	TTGATGGTTT	GCAATTTCAA	GTTCCTATCG	ACATGTAGTG	АТСТААААА	960

FYI

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

also, see Fen 10 on Evon Summary Sheet

Input Set : A:\108172-00022.txt

Output Set: N:\CRF3\01232001\1701395.raw

E:12 M:270 C: Current Application Number differs, Replaced Current Application Number L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:35 M:112 C: (48) String data converted to lower case, - M:112 Repeated in SeqNo=1 L:294 M:112 C: (48) String data converted to lower case, M:112 Repeated in SeqNo:3 L:554 M:112 C: (48) String data converted to lower case, M:112 Repeated in SeqNo=9 L:594 M:112 C: (48) String data converted to lower case, M:112 Repeated in SeqNo=10 L:636 M:112 C: (48) String data converted to lower case, M:112 Repeated in SegNo=11 L:684 M:112 C: (48) String data converted to lower case, M:112 Repeated in SeqNo=12 L:729 M:112 C: (48) String data converted to lower case, M:112 Repeated in SegNo=13 L:741 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:13 L:741 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13 L:741 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13 L:741 M:258 W: Mandatory Feature missing, <223> not found for SEO ID#:13 L:741~M:340~W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:13 L:743 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:13 I.: 743 M: 258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13 L:743 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13 L:743 M:258 W: Mandatory Feature missing, <223> not found for SEQ 1D#:13 M:340 Repeated in SeqNo=13 L:745 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:13 I,:745 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13 L:745 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13 L:745 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:13 $L:747\ M:258\ W:$ Mandatory Feature missing, <220> not found for SEQ ID#:13 L:747 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13 $I_{\rm c}$:747 M:258 W: Mandatory Feature missing, <222> not found for SEO ID#:13 L:747 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:13 L:749 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:13 L:749 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13 $I_{\rm cl}$:749 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13 L:749 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:13 L:751 M:258 W: Mandatory Peature missing. <220> not found for SEQ ID#:13 L:751 M:258 W: Mandatory Peature missing. <221> not found for SEQ ID#:13 L:751 M:258 W: Mandatory Feature missing, <222> not found for SEQ 1D#:13L:751 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:13 L:1341 M:112 C: (48) String data converted to lower case, M:112 Repeated in SeqNo=22 L:1521 M:112 C: (48) String data converted to lower case, M:112 Repeated in SeqNo=24 L:1634 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:25 L:1634 M:258 W: Mandatory Feature missing, <221> not found for SEO ID#:25

VERIFICATION SUMMARY PATENT APPLICATION: US/09/701,395

DATE: 01/23/2001 TIME: 11:13:19

Input Set : A:\108172-00022.txt

Output Set: N:\CRF3\01232001\I701395.raw

```
L:1634 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:25
  L:1634 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:25
  L:1634 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:25
. ▶ L:1743 M:258 W: Mandatory Feature missing, <220> not found for SEQ 1D#:26
  L:1743 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:26
  L:1743 M:258 W: Mandatory Feature missing, <222> not found for SEQ 1D#:26
  L:1743 M:258 W: Mandatory Feature missing, <223> not found for SEQ (D):26
  L:1743 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ 1D#:26
  L:1840 M:112 C: (48) String data converted to lower case,
  M:112 Repeated in SeqNo=28
  L:1881 M:112 C: (48) String data converted to lower case,
  M:112 Repeated in SeqNo=29
  L:1931 M:112 C: (48) String data converted to lower case,
  M:112 Repeated in SeqNo=30
  L:1975 M:112 C: (48) String data converted to lower case,
  M:112 Repeated in SeqNo=31
  L:2015 M:112 C: (48) String data converted to lower case,
  M:112 Repeated in SeqNo=32
  L:2055 M:112 C: (48) String data converted to lower case,
  M:112 Repeated in SeqNo=33
  L:2125 M:112 C: (48) String data converted to lower case,
  M:112 Repeated in SeqNo=34
  L:2163 M:112 C: (48) String data converted to lower case,
  M:112 Repeated in SeqNo=35
  L:2782 M:112 C: (48) String data converted to lower case,
  M:112 Repeated in SeqNo=46
  L:3019 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:48
  L:3019 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:48
  L:3019 M:258 W: Mandatory Feature missing, <222> not found for SEQ 1D#:48
  L:3019 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:48
  L:3019 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:48
```